

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Konstantinos Chondroudis, et al.
Art Unit: 1755
Serial No.: 10/777,386
Filed: February 12, 2004
Confirmation No.: 4581
For: METHOD FOR THE SYNTHESIS OF A FUEL CELL ELECTROCATALYST
Examiner: Patricia L. Hailey

November 20, 2006

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

TO THE COMMISSIONER FOR PATENTS,

SIR:

Applicants acknowledge receipt of the Notice of Allowance and Fee(s) Due and the accompanying comments dated August 25, 2006.

The Office stated that the reason for allowance of the present application was that:

The prior art of record does not teach or suggest the claimed process of forming supported metal-containing powder, wherein a dispersion of a particulate support in a solution is formed (said solution comprising a solvent and a dissolved metal, and said particulate support comprising a pre-deposited material), heat is removed from the dispersion to precipitate the dissolved metal from the solution onto the support and to freeze the solution, the support is separated from the frozen solution by freeze-drying to yield the supported metal-containing powder (comprising the particulate support and a precipitated metal thereon), wherein, during said separation, at least a portion of the frozen solution is allowed to melt, and an alloy is formed on said particulate support, said alloy comprising metals derived from the pre-deposited material and the precipitated metal.

In response thereto, Applicants respectfully submit that claims 1-3 and 5-15 are directed to a process of forming supported metal-containing powder comprising the steps substantially as stated above.

Claims 19-37 and 39-48 are alternatively directed to a method for forming a supported metal-containing powder, wherein a dispersion of a particulate support in a solution is formed (said solution comprising a solvent, a first dissolved metal and a second dissolved metal), heat is removed from the dispersion to precipitate the first dissolved metal and the second dissolved metal from the solution onto the particulate support and to freeze the solution, wherein the heat is removed from the dispersion by contacting a container containing the dispersion with a cryogenic liquid, and the particulate support is separated from the frozen solution by freeze-drying to yield the supported metal-containing powder, the powder comprising the particulate support and the precipitated first and second metals thereon.

Claim 49 is alternatively directed to a method of forming a carbon supported platinum alloy, wherein a dispersion of a carbon supported platinum in a solution is formed (the carbon supported platinum comprising a particulate carbon support and platinum in its metallic oxidation state thereon, and the solution comprising a solvent and a dissolved non-platinum metal), heat is removed from the dispersion to precipitate the dissolved non-platinum metal from the solution onto the carbon supported platinum and to freeze the solution, wherein the heat is removed from the dispersion by contacting a container containing the dispersion with a cryogenic liquid, the frozen solution and the carbon supported platinum are separated by

freeze-drying, and an alloy is formed on the particulate carbon support to yield the carbon supported platinum alloy, the carbon supported platinum alloy comprising the particulate carbon support and the platinum and the non-platinum metal derived from the precipitated non-platinum metal.

Claims 50-56 are alternatively directed to a method for forming a supported metal-containing powder, wherein a dispersion of a particulate support in a solution is formed (the solution comprising a solvent and a dissolved metal, the dispersion comprising about 1 to about 30 weight percent of the particulate support), heat is removed from the dispersion to precipitate the dissolved metal from the solution onto the particulate support, and the particulate support and the solution are separated to yield the supported metal-containing powder, the powder comprising the particulate support and a precipitated metal.

Accordingly, it is Applicants understanding that claims 19-37 and 39-56 have been found patentable for reasons already made of record herein.

Respectfully submitted,



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